



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,771	02/04/2004	Hiroyuki Nagao	60674 (49381)	3540
21874	7590	05/17/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			KUMAR, RAKESH	
			ART UNIT	PAPER NUMBER
			3654	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/772,771	Applicant(s) NAGAO ET AL.	
	Examiner Rakesh Kumar	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on Amendment filed 02/07/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Final Rejection

Applicant's arguments filed 02/07/2006 have been fully considered but they are not persuasive for reasons detailed below.

The prior art rejections are maintained or modified as follows:

Claim Rejections - 35 USC § 103

1. Claim 1-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (U.S. Patent Number 6,091,927) in view of Hirota et al. (U.S. Patent Number 6,585,258).
2. Referring to claims 1,4,6, 9,11,14,18 and 19. Hattori et al. discloses a document feeding apparatus consisting of a sheet container 7 for containing a plurality of stacked sheets and an elevation lowering driving unit 33 for elevating and lowering the sheet container 7. Hattori et al. also discloses a sheet conveying unit 8 for individually removing the uppermost layer in contact with the sheet conveying unit 8 when the sheet container 7 is elevated by the elevation lowering driving unit 33, the sheet is removed from stack 5 and forwarded by a predetermined conveyance path shown, and further moved toward an image reading unit (Figure 1, Col. 3, lines 62-67). Hattori et al. teaches when the elevation lowering unit 33 is driven, it raises the sheet container 7 in order to bring the documents 5 into pressing contact with the sheet conveying unit 8. It is understood to mean that when a stack of media sheets of unknown height are raised

and is continued to be raised, until the top most media sheet initiates contact with the sheet conveying unit 8, at some point of reference the elevation lowering unit 33 stops driving the sheet container upwards, this is understood to be taken as a sensory input which dictates the stopping of the elevation lowering unit 33 from continuously raising the media sheets beyond the sheet conveyance unit 8 (Col. 5 line 8-15).

Hattori et al. does not disclose a regulating unit as to being disposed and positioned on the sheet container nor does he disclose a position detector for detecting the position of the regulating unit.

Hirota et al. teaches of a regulating unit 13 to be moveably mounted and the position of the regulating unit 13 to be verifiable by the disposed sensors S1 on the apparatus. The sensors are disposed to allowing a signal to the controller to be sent and the position of the regulating unit 13 can be determined. Hattori also teaches of using the sensors S1 to detect the size dimensions of the sheet contained in the sheet container so that multiple size sheets can be used to feed into the apparatus (Col. 5, lines 29-36).

It would have been obvious to one of ordinary skill in the art at the time invention was made, to combine the teaching of Hattori et al. and Hirota et al. to modify the input received from the regulating unit as detected by the positioned sensors when the position of the regulating unit is altered to instruct the elevation lowering driving unit to lower the sheet container from initiating contact with the sheet conveyance unit. This is a slight modification over Hattori et al. in Figure 6, where it is disclosed that the sheet container "return" to its original position after dispensing the documents that were

positioned on the sheet container 7. By lowering the sheet container from contacting the sheet conveying unit by sensing the position change of the regulating unit will allow for an easy addition and removal of sheets from the sheet container and prevent damage to the pickup roller and contamination marks on the sheets.

3. Referring to claims 2,7,12 and 17. See Claim 1. Hattori et al. discloses using the elevation lowering driving unit 33 to lowering the sheet container 7 until the uppermost layer of the sheets in contact with the sheet conveying unit 8 are separated from each other by the means of a controller. This step occurs when a detector detects a paper jam, or is engaged into a power save mode or when the documents 5 are expected to be rearranged in the sheet container (Col. 7 lines 1-16).

Hattori et al. does not disclose of using a regulating unit in the apparatus.

Hirota et al. clearly discloses sensors being able to detect a change in the position of the regulating unit 13.

It would have been obvious to one of ordinary skill in the art at the time invention was made, to combine the teaching to Hattori et al. and Hirota et al. to modify the apparatus to include sensors and a regulating unit 13 where a change in the position of the regulating unit 13 can be detected by the sensors and as a result remove the sheet container 7 from the sheet conveying unit 8 by the means of the elevation lowering driving unit 33, as a result, be able to add or load documents whenever the position of the regulating unit is changed.

Art Unit: 3654

4. Referring to claims 3,8,13 and 18. See Claim 1. Hattori et al. discloses a CPU 29 and a receiving unit 28 for receiving information according to the sensors positioned throughout the apparatus and storing the received information. Hattori et al. also discloses the sheet container 7 is lowered to its “preselected” position away from the sheet conveyance unit 8 when a signal is received to disengage the sheet container 7 from the roller (Col. 7 line 7).

Hattori et al. does not disclose of using a regulating unit in the apparatus.

Hirota et al. discloses sensors being able to detect a change in the position of the regulating unit 13.

It would have been obvious to one of ordinary skill in the art at the time invention was made, to combine the teaching to Hattori et al. and Hirota et al. to modify the apparatus so that the sheet conveyance unit 8 and the sheet container 7 are disengaged by a “predetermined” amount as initially set and stored in the receiving unit 28 as disclosed by Hattori et al. when the position of the regulating unit is changed and detected. As a result the sheet conveyance roller can be prevented from being damaged and the leading edges of the sheet from being contaminated.

5. Referring to claims 5,10,15 and 20. Regarding claim 5, Hattori et al. discloses the embodiment to allow a preslected waiting time to be set between the document stacking time and elevation of the sheet container 7 (Col. 9 lines 23-30).

Hirota et al. discloses sensors being able to detect a change in the position of the regulating unit 13.

It would have been obvious to one of ordinary skill in the art at the time invention was made, to combine the teaching to Hattori et al. and Hirota et al. to modify the apparatus in such that when the documents are loaded onto the sheet container 7 and no position change is detected in the regulating unit the clocking mechanism begins, waiting for a predetermined time as disclosed by Hattori et al. and then elevating the sheet container 7 to engage the sheet conveyance unit. As a result, the wear on the elevating and lowering driving unit is minimized as the apparatus waits for all the documents to be loaded prior the engaging the sheet conveyance unit.

Response to Arguments

6. Applicant's arguments filed 02/07/2006 have been fully considered but they are not persuasive for reasons detailed below.

7. The Applicant argues, "None of the cited prior art, taken alone or in combination, teach or suggest the presently claimed sheet feeding apparatus."

In response as stated in rejection under 35 U.S.C. 103(a) in this Office (Paragraph 1 and 2);

Hirota teaches of a regulating unit (13), being movable (slidable) in width direction of the documents positioned on sheet container (2), thus is considered to regulate a set position of a sheet. Hirota further discloses, "the width of documents is

detected by the position of this guide plate", (Col. 5 line 3) thus, an undisclosed position detector for detecting the position of the regulating unit on the tray (2).

Hattori teaches "the motor 33 is driven to raise the bottom plate 7 (step S25) until the documents 5 on the table 6 have been pressed against the pick-up roller 8", (lift up sensor 27; Col. 7 line 22-34), thus indicating a contact detector for detecting a contact state of when the uppermost sheet of the contained stack in the container contacts the sheet conveying unit. The reference of Hattori teaches the elevation/lowering driving unit (33) lowers or elevates the sheet container (7) per input signal received from either a user input or an internal sensor (lift sensor 27) when the stated task is completed (Col. 5 line 8-15, Col. 7 line 5-10). It would have been obvious to one of ordinary skill in the art at the time invention was made to have modified the teaching of Hattori with the teaching of Hirota such that when a signal (change in position of the regulating unit of Hirota) is received by the controller of the apparatus, the elevation/lowering driving unit (33) of Hattori lowers the sheet container to either reposition or add/remove documents from the tray.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the reference stated in the Office are nonanalogous art, it has been held that a prior art reference must either be in the field of

Art Unit: 3654

applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Optiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references of Hattori and Hirota disclose automatic document feeders to feed sheet through the apparatus.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3654

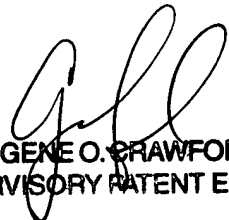
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh Kumar whose telephone number is (517) 272-8314. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RK
May 12, 2006


GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER